



METHODS FOR DEVELOPING ANALYTICAL COMPETENCE IN PRESCHOOL TEACHERS

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Abstract

This article examines the process of developing analytical competence among early childhood educators as a holistic system comprising operational, reflective, and value-based components. It argues for the necessity of a phased approach to developing this competence using complementary pedagogical methods. The case method and portfolio are analyzed as the primary means of developing the operational component, as they ensure the connection between theoretical knowledge and practical activity and the development of skills for analyzing professional situations. The development of the reflective component is examined through a SWOT analysis to evaluate one's own pedagogical practice critically. The formation of the value component is linked to the use of group discussion methods aimed at understanding professional values and exchanging experiences. The structure of the integrative method is presented, including the stages of analysis, interpretation, evaluation, and collective reflection on pedagogical practice. It is concluded that the comprehensive application of these methods contributes to increasing the effectiveness of teachers' professional activities in the context of modern preschool education.

Keywords: Analytical competence, preschool education, pedagogical activity, case method, portfolio method, SWOT analysis, reflection, group discussion, integrative approach, professional development of teachers.

Introduction

The development of analytical competence among preschool educators is a comprehensive process requiring a phased approach to the formation of three main components: operational, reflective, and value-based. Each component requires the application of specialized methods and modern information technologies, which together ensure the holistic development of a teacher's analytical competence.

To effectively develop these components, this study selected and combined three interrelated methods, each corresponding to one component.

Within the framework of developing analytical competence, the operational component takes on particular significance, as it is directly linked to the teacher's practical actions in analyzing, interpreting, and solving professional tasks. It is within this component that theoretical knowledge is applied in real or simulated pedagogical situations, ensuring the transition from information acquisition to conscious application.

One effective method for developing the operational component of analytical competence in teachers is the case method, also known as situational analysis.

This method is based on the analysis of descriptions of real-world problem situations in professional practice. Its use allows educators to identify a problem, analyze its causes, consider possible alternatives, and provide reasoned justifications for optimal solutions, thereby developing sustainable analytical skills [1].

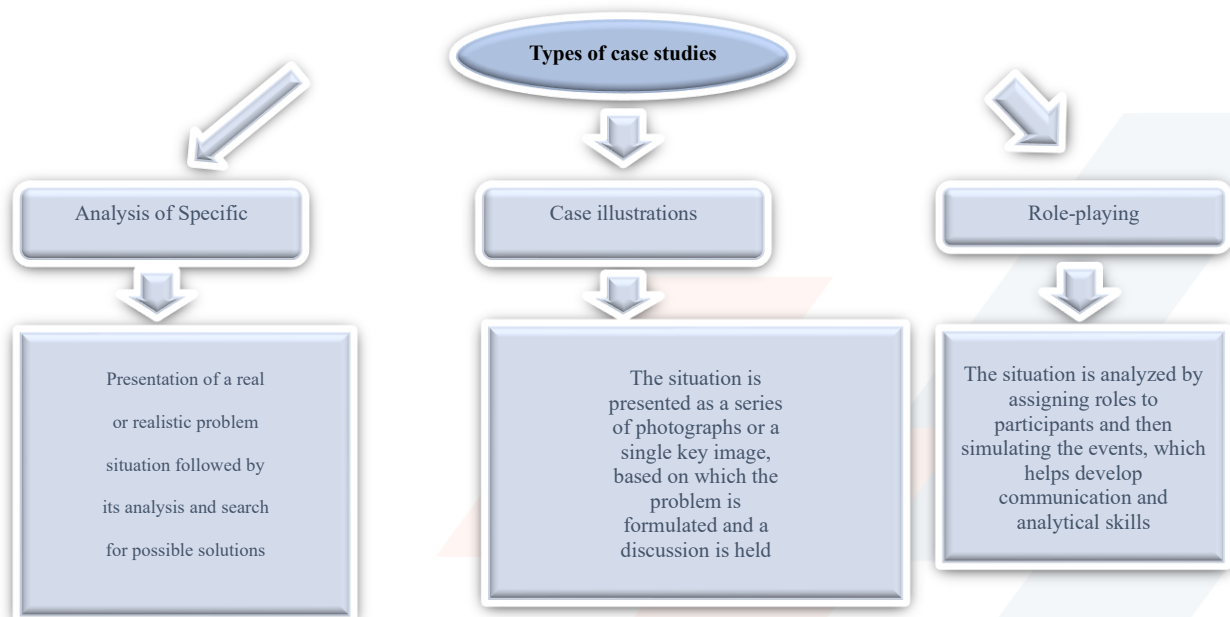


Fig. 1. Types of case methods in the pedagogical activities of preschool educators



Figure 1 illustrates three types of case methods used in educational practice, each with its own distinctive features.

The first type is the analysis of specific situations, which involves presenting a real or realistic problem situation, followed by its analysis and the search for possible solutions.

The second type is the case illustration, or photo case, in which the situation is presented through a series of photographs or a single key image, based on which the problem is formulated and discussed.

The third type is role-playing, in which students assume roles and simulate scenarios, thereby developing both communication and analytical skills.

As Y. Bezborodova emphasizes, this method allows teaching theory from the perspective of real-life events. It promotes the active acquisition of knowledge and skills in collecting, processing, and analyzing information. As a result, students develop the necessary skills: analytical (analysis, classification of information), practical (application of theoretical knowledge in practice), creative (proposals, analysis of solutions), communicative (ability to work in a group, lead a discussion, present one's point of view with reasoning, sustain a discussion, persuade opponents), social (ability to listen, assess the behavior of others), and reflective (self-analysis) [2].

In turn, Zemskova A. S. notes that the use of the case method for situation analysis encourages students to reflect on real-life situations that pose specific practical problems requiring the application of a particular body of knowledge to solve them. At the same time, the problem itself does not have unambiguous solutions [3].

Effective use of the case method requires going through five key stages of development. First, the problem is identified, during which the case topic is selected, and questions are formulated. It is important to choose a specific situation that is meaningful and interesting for analysis. This is followed by the discussion stage, during which information is gathered and analyzed, and the context in which the case unfolds is clarified. The third step is the debate, in which various solutions to the problem are considered, and possible scenarios for its development are discussed. Next comes the reasoning stage, where the case description is structured and edited, and the presentation's details and logic are refined. Finally, in the truth stage, the main question or set of questions is



formulated to stimulate further discussion and a deep analytical examination of the situation.

Alongside the case method, it is advisable to use the portfolio method when developing the operational component of analytical competence, as it focuses on the practical consolidation and systematization of professional experience. Within this method, educators engage in the targeted collection, analysis, and synthesis of results from their own activities, thereby linking theoretical concepts to practice. N. I. Suprun and T. I. Kuligina noted that the portfolio method is widely used as a tool for assessing a student's academic achievements, involving the targeted collection of documents documenting achievements in academic, creative, and social activities [4].

A teacher's portfolio is an individual collection of materials reflecting the teacher's achievements over a specific period. It includes the results of educational, formative, and developmental activities, students' successes, and the teacher's own contribution to the development of the education system. A portfolio is, in the words of G. Brauer, a "showcase," and each person decides for themselves how to present it [5]. A portfolio allows for an objective assessment of results achieved in various areas of pedagogical activity, such as academic, educational, creative, social, and communicative. The portfolio serves as an alternative tool for assessing professionalism and an indicator of the teacher's effectiveness and level of self-development. The portfolio has a specific structure and consists of a few substantive sections. Since there are currently no strict state requirements for its design, the teacher can independently select sections in accordance with their professional activities.

The next stage involves developing a reflective component to analyze one's own professional practice critically. In this context, it is advisable to apply the SWOT analysis method, which allows for the systematic identification of the strengths and weaknesses of pedagogical practice, as well as the determination of external opportunities and threats. The use of this method contributes to the formation of a conscious attitude toward one's own practice and creates conditions for its purposeful improvement. Teachers are encouraged to analyze their own activities by creating a table that reflects the strengths and weaknesses of their work with children, parents, and colleagues [6].



The relevance of developing teachers' reflective skills is confirmed by the research findings of AlMarwani M., which substantiate the need to foster critical thinking among teachers as a prerequisite for meeting the demands of 21st-century education. The author emphasizes that effective teaching of critical thinking is possible only if these skills are developed in the teachers themselves, which requires their systematic training and engagement in reflective practice [7]. The theoretical foundations for applying SWOT analysis in pedagogy are explored by N. V. Sofronova, who defines it as a strategic analysis method comprising four key components: Strengths, Weaknesses, Opportunities, and Threats. It consists of an analysis of the object under study's strengths and weaknesses in relation to the external environment's threats and opportunities. It enables the identification of current problem areas, bottlenecks, opportunities, and risks associated with the object under study, taking into account external environmental factors [8].

In general terms, a SWOT analysis is conducted by completing the corresponding matrix (Table 1), which systematizes the results.

Table 1 SWOT Analysis Matrix

SWOT Analysis	Opportunities (O)	Opportunities (O)
Strengths (S)		
Weaknesses (W)		

Table 1 provides an example of a completed SWOT matrix, in which the strengths and weaknesses of the selected method, as well as potential opportunities and threats, must be entered.

In this context, strengths represent the method's advantages that ensure its effectiveness and efficiency. Weaknesses, on the other hand, are the shortcomings or limitations that hinder its application.

Opportunities are favorable external conditions that facilitate the successful implementation of the method. At the same time, threats are seen as external factors that can undermine the method's effectiveness or limit its application.

The effectiveness of SWOT analysis is demonstrated in the research by Dieste-Velasco M. I. et al., in which this method is used to identify factors influencing active teaching methods, to strengthen their strengths, and to minimize risks [9].

In turn, Y. O. Kharlamova, S. A. Shchegoleva, and T. Y. Shkarina noted that the



SWOT analysis methodology involves identifying strategic decisions based on forecasts regarding opportunities and threats in the external environment, which is particularly important in educational activities [10].

Thus, SWOT analysis serves as an effective, accessible, and resource-efficient tool for evaluating pedagogical activities. Its regular application (at least once a year) contributes to the systematic development of the reflective component of teachers' analytical competence.

The SWOT analysis procedure includes several stages: identifying participants, gathering information, completing the SWOT matrix, evaluating the results, and developing an action plan based on the analysis. During the study, it is important to adhere to several principles, including using only reliable information, organizing teamwork through brainstorming, and segmenting data to distinguish significant information from secondary details clearly.

Following the analysis, all the points discussed by the participants are compiled. To create a list of tasks and an action plan, each item must be assigned as a priority. Low-priority items are removed or set aside for future meetings. Ultimately, only those tasks that are relevant now and in the near future will remain.

The final stage involves developing a values component that reflects the educator's professional and personal values. We recommend using a group discussion format that incorporates modern information technology, as this facilitates the exchange of experiences, strengthens professional ties, and fosters shared values.

Participation in online forums and professional groups, and the use of available Internet resources for professional communication [11]. Methods of collective analysis include professional learning communities, where educators jointly analyze practice, share experiences, and learn from one another. Such communities foster a culture of continuous professional development and mutual support.

A. Sh. Amirzhanova and G. V. Tolmacheva noted that the collective analysis method is not merely a well-designed, methodologically sound project. The use of this method is largely linked to innovative developments in the modern education system. An important aspect of teaching is ensuring that the educator's

approach to the case method's methodological foundation is not merely formal or superficial.

This method can also play an important role in enhancing the teacher's professional competence by integrating research, instructional, and educational aspects into the teaching system [12]. The systematic application of the methods presented, through their interconnection and complementarity, creates conditions for the comprehensive development of analytical competence among preschool educators, ensuring their readiness for effective professional activity in modern conditions.

The methods discussed earlier for developing the cognitive, operational, reflective, and value-based components of analytical competence represent well-founded and effective pedagogical tools. However, their consistent and interconnected application enables the formation of a more complex and methodologically robust structure that includes an integrative approach to developing analytical competence, combining elements of the case method, portfolios, SWOT analysis, and group discussion into a unified system of pedagogical influence.

The integrative approach reflects the current trend toward the comprehensive development of teachers' professional competence, in which training is no longer fragmented but is systematically organized to achieve holistic mastery of analytical skills. The proposed integrative method for developing the analytical competence of early childhood educators is a modular model in which each stage corresponds to a specific component of competence and logically transitions to the next, forming a holistic process of analytical development.

Table 2 The Structure of the Integrative Method of Analytical Competence

N	Stage	Objective	Main method	Component being developed
1.	Analysis of the problem situation	Understanding the context, formulating analytical tasks	Case study	Operational
2.	Recording and interpreting one's own experience	Application of theoretical knowledge and evaluation of performance results	Portfolio	
3.	Reflection on One's Own Practice	Recognizing limitations, prospects, and areas for development	SWOT analysis	Reflective
4.	Collective interpretation and reflection	Formation of professional meanings and positions	Group discussion	Value-based



As shown in Table 2, we developed a framework for an integrative method to enhance preschool educators' analytical competence. We identified four stages, each corresponding to a specific component of competence and based on a specific method.

In the first stage, related to the analysis of a problem situation, we used the case method, as it allows educators to make sense of the context and formulate analytical tasks. In our view, this contributes to the development of the cognitive component.

This is followed by the stage of recording and interpreting one's own experience, where we applied the portfolio method. It provides an opportunity to correlate theoretical knowledge with the results of one's own practice, which forms the operational component.

The next stage is the evaluation of one's own practice, which we conducted using a SWOT analysis. This method proved effective in recognizing the strengths and weaknesses of professional activity and in identifying areas for improvement. As a result, educators develop the reflective component.

We designated the final stage as collective interpretation and reflection. Here, we used collective discussion, which contributes to the formation of the value-based component of analytical competence by fostering awareness of professional meanings and positions in dialogue with other participants in the educational process.

Thus, the structure we propose enables the step-by-step, purposeful development of teachers' analytical competence through a combination of individual reflection and collective analysis.

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